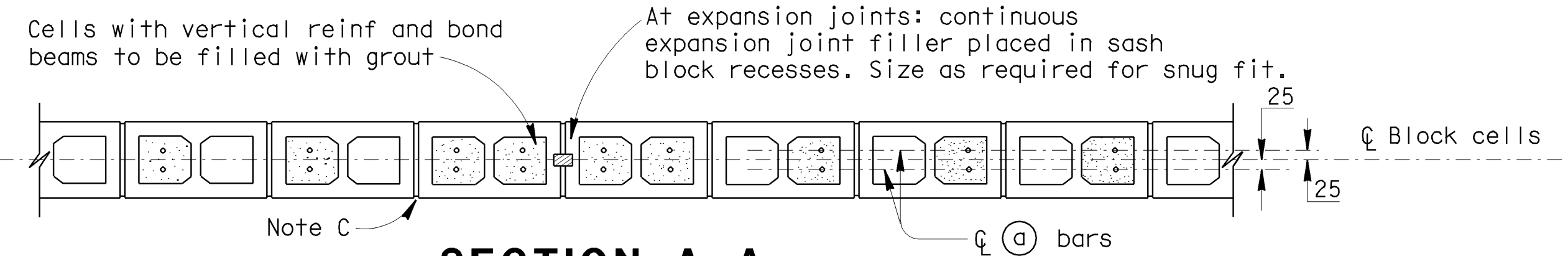


GENERAL NOTES

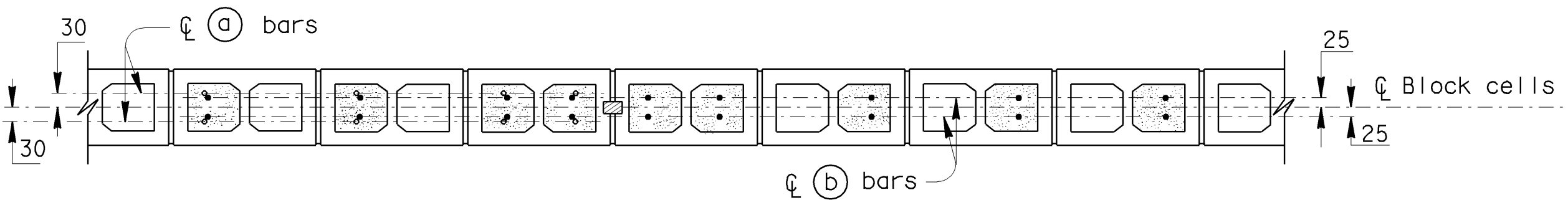
- Note A: For type of block and joint finish, see other sheets.
- Note B: When blocks are laid in stacked bond, ladder type, galvanized joint reinforcement shall be provided. A minimum of 2-3.76 mm wires continuous at 1219 maximum to be used. Locate reinforcement in joints that are at the approximate midpoint between bond beams.
- Note C: Horizontal joints shall be tooled concave or may be raked. Vertical joints shall be tooled concave or may be raked.
- Note D: For intermediate wall heights that are between the "H's" given, use the tabular information for the next higher "H".
- Note E: Masonry strengths are listed in the "SOUNDWALL REINFORCEMENT TABLE".
- Note F: Geotechnical Services should confirm the stability of the slopes.



SECTION A-A

For details not shown,see other sections

H=1829 THRU H=3048

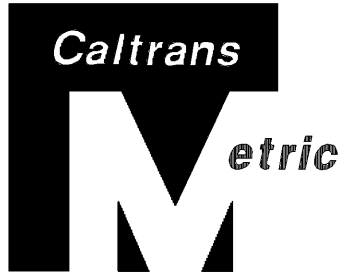


SECTION A-A

SECTION B-B

For details not shown,see other sections

H=3658 THRU H=4877



DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
REGISTERED ENGINEER - CIVIL					
PLANS APPROVAL DATE					
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					

DESIGN NOTES

DESIGN

Uniform Building Code, 1997 Edition and the Bridge Design Specifications.

DESIGN WIND LOAD

958 Pa for all heights (H)

DESIGN SEISMIC LOAD

0.57 Dead load

CONCRETE MASONRY

REINFORCED CONCRETE

f'c = 22.41 MPa
fy = 413.7 MPa

REGULAR STRENGTH

f'm = 10.34 MPa
fm = 3.41 MPa
fs = 165.5 MPa
n = 25.8

HIGH STRENGTH

f'm = 13.79 MPa
fb = 4.55 MPa
fs = 165.5 MPa
n = 19.3

f'm = 17.24 MPa
fb = 5.72 MPa
fs = 165.5 MPa
n = 15.5

LOAD FACTORS AND LOAD COMBINATIONS

Working Stress Design (WSD) Percentage of unit stress

Group 1: D + E + SC 100%
Group 2: D + W + SC + E 100%
Group 3: D + 0.71 EQD + E 100%

Where:

D = Dead load
E = Lateral earth pressure
SC = Live load surcharge
W = Wind load
EQD = Seismic dead load

Load Factor Design (LFD)

Group A: BD +1.7 E + 1.7 SC
Group B: BD +1.7 E + 1.3 W
Group C: BD +1.3 E + 1.0 EQE
Group D: BD +1.3 E + 1.0 EQD
Group E: BD +1.1 E + 0.85 (EQE+EQD)

Where : B = 0.9 or 1.2, whichever controls in design
D = Dead load
E = Lateral earth pressure
SC = Live load surcharge
W = Wind load
EQD = Seismic dead load
EQE = Seismic earth load

STRENGTH REDUCTION FACTORS, Ø

Reinforced concrete :

For flexure ----- Ø = 0.90
For shear ----- Ø = 0.85

Concrete masonry:

For flexure ----- Ø = 0.80
For shear ----- Ø = 0.60

Note 1: Concrete masonry designed by the Strength Design Method. Pile caps and piles designed for flexure and shear (Internal stability) by the Strength Design Method.

Note 2: Case 1 - Level ground on both sides of the soundwall: Pile embedment lengths (External stability) were determined using the Sheet Pile Procedure with Service Loads and a Factor of Safety for overturning of 2.0. Allowable net lateral soil pressures (Q) of 38.2 kN/m²/m (243 psf/ft), 62.1 kN/m²/m (395 psf/ft) and 101 kN/m²/m (643 psf/ft) were considered based on a Log Spiral Analysis using 67% of the ultimate passive pressure. These values correspond with angles of shearing resistance (Ø) of 25°, 30° and 35° respectively and unit weights of soil (Ø) of 17.27 kN/m³ (110 pcf), 18.05 kN/m³ (115 pcf) and 18.84 kN/m³ (120 pcf) respectively. An Isolation Factor of 3.0 was used on both sides.

Note 3: Case 2 - Level ground on one side of the soundwall and sloping ground on the opposite side: Pile embedment lengths (External stability) were determined using the Sheet Pile Procedure with Service Loads and a factor of Safety for overturning of 2.0. Allowable net lateral soil pressures for the sloping side of the wall (Q) of 10.5 kN/m²/m (67 psf/ft), and 21.68 kN/m²/m (134 psf/ft) were considered based on a Log Spiral Analysis using 67% of the ultimate passive pressure. These values correspond with angles of shearing resistance (Ø) of 30° and 35° respectively and unit weights of soil (Ø), 18.05 kN/m³ (115 pcf) and 18.84 kN/m³ (120 pcf) respectively. Isolation factors were 3.0 for the level side and 2.0 for the sloping side.

ALL DIMENSIONS ARE IN
MILLIMETERS UNLESS OTHERWISE SHOWN

NO SCALE

STANDARD DRAWING					BRIDGE NO.		SOUNDWALL - MASONRY BLOCK ON PILE CAP		
RELEASE DATE 9/8/03	DESIGN BY D. DUNRUD	CHECKED W.C. WALKER	RELEASED BY	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION		DIVISION OF ENGINEERING SERVICES		KILOMETER POST	DETAILS NO. 2
FILE NO. xs15-020-2	SUBMITTED BY D. DUNRUD	DRAWING DATE 11/94	OFFICE CHIEF Robert L. Smith	CU EA		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES (PRELIMINARY STAGE ONLY)	
DS OSD 2147A (METRIC) (REV. 2/25/97)				ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS		0 10 20 30 40 50 60 70 80 90 100		SHEET OF	
USERNAME => jsanchez								xs15-020-2.dgn	